

Title (en)  
COMPONENT RECORD PROCESSING FOR AIRCRAFT MAINTENANCE

Title (de)  
KOMPONENTENSATZVERARBEITUNG FÜR DIE FLUGZEUGWARTUNG

Title (fr)  
TRAITEMENT D'ENREGISTREMENT DE COMPOSANT POUR LA MAINTENANCE D'AÉRONEF

Publication  
**EP 4141755 A1 20230301 (EN)**

Application  
**EP 22165099 A 20220329**

Priority  
US 202117445927 A 20210825

Abstract (en)  
A method (200) for aircraft maintenance comprises loading (202), into computer memory (301), a plurality of unstructured aircraft component records (400) originating from one or more different component status monitors (304, 306), the plurality of unstructured aircraft component records (400) describing observed maintenance conditions of a plurality of different aircraft components (102, 104, 106). The plurality of unstructured aircraft component records (400) are provided (204) from computer memory (301) to a natural language processing (NLP) model (404) configured to output a corresponding plurality of digital component, condition, and location (CCL) records (406) for the plurality of different aircraft components (102, 104, 106). CCL records (400) for a plurality of different CCL types (702A, 702B, 702C, 702D) are independently computer aggregated (206). The CCL records (500A, 500B, 500C) for a selected CCL type (502) are computer aggregated (208) to determine a time-dependent failure distribution (506) for the selected CCL type (502).

IPC 8 full level  
**G06Q 10/00** (2006.01)

CPC (source: EP US)  
**B64F 5/40** (2016.12 - US); **B64F 5/60** (2016.12 - US); **G06F 40/40** (2020.01 - US); **G06N 3/08** (2013.01 - US); **G06Q 10/20** (2013.01 - EP)

Citation (search report)  
• [I] ROGÃ RIO S RODRIGUES ET AL: "Aircraft interior failure pattern recognition utilizing text mining and neural networks", JOURNAL OF INTELLIGENT INFORMATION SYSTEMS, KLUWER ACADEMIC PUBLISHERS, BO, vol. 38, no. 3, 1 September 2011 (2011-09-01), pages 741 - 766, XP035053130, ISSN: 1573-7675, DOI: 10.1007/S10844-011-0176-1  
• [A] GUO JIAN ET AL: "Reliability centered preventive maintenance optimization for aircraft indicators", 2016 ANNUAL RELIABILITY AND MAINTAINABILITY SYMPOSIUM (RAMS), IEEE, 25 January 2016 (2016-01-25), pages 1 - 6, XP032889520, DOI: 10.1109/RAMS.2016.7448068

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**EP 4141755 A1 20230301**; CN 115731636 A 20230303; US 2023061096 A1 20230302

DOCDB simple family (application)  
**EP 22165099 A 20220329**; CN 202210602069 A 20220530; US 202117445927 A 20210825